

A PLANAR SENSOR AND A METHOD FOR MEASURING THE
TEMPERATURE OF SAME

ABSTRACT

In a planar oxygen sensor having a pump cell, a reference cell, a sensor chamber and a heating device, a ground plane electrode is provided and includes a sensing portion having a first sense lead and a second sense lead and a measuring portion having a first measuring lead and a second measuring lead, wherein the first measuring lead and the second measuring lead have increased surface area relative to said sensing portion such that the resistance between the first measuring lead and the second measuring lead is reduced and wherein the first measuring lead is disposed so as to be communicated with the first sense lead and the second measuring lead is disposed so as to be communicated with the second sense lead. Also, in a planar oxygen sensor having a pump cell, a reference cell, a sensor chamber, a heating device and a ground plane electrode that includes a sensing portion having a first sense lead and a second sense lead and a measuring portion having a first measuring lead and a second measuring lead, a method for measuring the temperature of the planar oxygen sensor is provided and includes obtaining a temperature measurement device, communicating the temperature measurement device with the first measuring lead and the second measuring lead, operating the planar oxygen sensor so as to cause the heating device to heat the planar oxygen sensor, and measuring the resistance between the first measuring lead and the second measuring lead.